

## CLAIMS

1. A pane (1) for a combat vehicle or vessel which is transparent to radiation  
 5 used for a purpose of its own, preferably visible light, and which comprises on its  
 outer face (8) a first layer (20), with which the pane is adapted  
to reflect the major part of a first electromagnetic radiation emitted by an enemy, and  
to reduce the pane's emittance of a second electromagnetic radiation received by the  
 enemy, c h a r a c t e r i s e d i n  
 10 that the pane also comprises a second layer (21, 22) which is arranged on the first  
 layer (20), with which second layer the pane is adapted  
to increase said emittance of the second electromagnetic radiation to such an extent  
 that the difference in intensity between the second electromagnetic radiation receiv-  
 ed by the enemy from the pane and the intensity from the parts of the combat vessel  
 15 which adjoin the pane, becomes so small that the pane essentially cannot be distin-  
 guished in an image of the combat vessel generated by said second electromagnetic  
 radiation, and  
to essentially maintain the pane's capability of reflecting the first radiation.
  
- 20 2. A pane as claimed in claim 1, c h a r a c t e r i s e d i n  
 that the first layer (20) comprises an electrically conductive material and is arranged  
 to reflect radar beams, and  
 that the second layer (21, 22) comprises at least one predetermined material and is  
 arranged to increase, by means of the kind of material of said material, the emittance  
 25 of the pane within at least part of the IR light range 2-20  $\mu\text{m}$ .
  
3. A pane as claimed in claim 2, c h a r a c t e r i s e d i n  
 that the predetermined material is a first material capable of increasing the emittance  
 of the pane in the IR light range 3-5  $\mu\text{m}$ , and  
 30 that the first material is included in a first coating (21), which is arranged directly or  
 by the intermediary of some other coating on the first layer (20).
  
4. A pane as claimed in claim 3, c h a r a c t e r i s e d i n  
 that the first material is near stoichiometric.

5. A pane as claimed in claim 3 or 4, c h a r a c t e r i s e d in that the first material comprises a metal oxide with relatively low electrical resistance, such as certain materials of the kinds: titanium oxide, zirconium oxide, hafnium oxide, magnesium oxide or tin oxide.
- 5 6. A pane as claimed in claim 5, c h a r a c t e r i s e d in that the tin oxide is a tin dioxide ( $\text{SnO}_2$ ).
7. A pane as claimed in any one of claims 3-6, c h a r a c t e r i s e d in that the first coating (21) has a thickness of 0.3-0.8  $\mu\text{m}$ , preferably about 0.5  $\mu\text{m}$ .
- 10 8. A pane as claimed in any one of claims 2-7, c h a r a c t e r i s e d in that the predetermined material is a second material capable of increasing the emittance of the pane in the IR light range 7-14  $\mu\text{m}$ , and
- 15 that the second material is included in a second coating (22), which is arranged directly or by the intermediary of some other coating on the first layer (20).
9. A pane as claimed in claim 8, c h a r a c t e r i s e d in that the second material is of the type that has residual beam properties.
- 20 10. A pane as claimed in claim 8 or 9, c h a r a c t e r i s e d in that the second material comprises a ceramic, such as certain materials of the kinds: silicon oxide, for instance quartz, beryllium oxide, beryllium silicate, silicon carbide, sialon, cubic boron nitride and silicon nitride.
- 25 11. A pane as claimed in claim 10, c h a r a c t e r i s e d in that the silicon nitride is an oxidised silicon nitride ( $\text{SiO}_x\text{N}_y$ ).
12. A pane as claimed in any one of claims 8-11, c h a r a c t e r i s e d in that the second coating (22) has a thickness of 0.5-1.5  $\mu\text{m}$ , preferably about 1.0  $\mu\text{m}$ .
- 30 13. A pane as claimed in any one of claims 1-12, c h a r a c t e r i s e d in that the pane is antireflex coated.
- 35 14. A pane as claimed in claim 13, c h a r a c t e r i s e d in that the pane comprises a first antireflex coating arranged on the second layer (21, 22) and a second antireflex coating arranged on the inner face (9) of the pane.

15. A pane as claimed in claim 14, c h a r a c t e r i s e d in that the first and second antireflex coatings consist of magnesium fluoride (MgF).

5 16. A pane as claimed in claim 13, c h a r a c t e r i s e d in that the pane comprises an antireflex coating, consisting of four partial layers, of alternately titanium dioxide (TiO<sub>2</sub>) and magnesium fluoride (MgF), arranged on the second layer (21, 22).